

### REMARKS

The above amendments to the above-captioned application along with the following remarks are being submitted as a full and complete response to the Office Action dated August 19, 2008. In view of the above amendments and the following remarks, the Examiner is respectfully requested to give due reconsideration to this application, to indicate the allowability of the claims, and to pass this case to issue.

### Status of the Claims

As outlined above, claims 1-5, 7-15, 17-24, and 26-29 stand for consideration in this application, wherein claim 25 is being canceled without prejudice or disclaimer, while claims 1, 11, 12, and 21 are being amended.

All amendments to the application are fully supported therein, including Fig. 1. Applicants hereby submit that no new matter is being introduced into the application through the submission of this response.

### Formal Objections

Claims 12 and 21 were objected to on the groundS of informalities. As set forth above, claims 12 and 21 are being amended so as to meet the formalities. Accordingly, withdrawal of this objection is respectfully requested.

### Prior Art Rejections

#### The First 35 U.S.C. §103(a) Rejection

Each of claims 1, 2, 4, 5, 8, 11, 13-15, and 18 was rejected under 35 U.S.C. §103(a) as being allegedly unpatentable over Barlow (U.S. Pat. No. 4,219,072) in view of Stuecheli (GB 2,049,922). Applicants respectfully traverse this rejection for the reasons set forth below.

### Claim 1

In a heat storage unit as recited in claim 1, at least a part of a discharge pipe extends in a horizontal direction, a first connection port of a supply pipe is positioned above a second connection port of said discharge pipe. The supply pipe passes through at least said heat storage body housed in said storage container and supplies said heat exchange medium into the storage container. The discharge pipe discharges said heat exchange medium housed in said storage container to the outside of said storage container. The first connection port and

the second connection port are configured to connect the heat storage unit with a heat exchanger. These features can eliminate a pressure difference between the outside and the inside of the heat storage unit even when the supply pipe and the discharge pipe are removed from the heat exchanger in a wrong procedure. Consequently, a heat storage body can be prevented from flowing inversely from the supply pipe. (See paragraphs [0031]-[0032] of the specification.)

In contrast, Barlow does not show at least a part of a discharge pipe that extends in a horizontal direction with a first connection port of a supply pipe positioned above a second connection port of said discharge pipe, as admitted by the Examiner. Thus, Barlow also cannot and does not show that at least a part of a discharge pipe extends in a horizontal direction, a first connection port of a supply pipe is positioned above a second connection port of said discharge pipe, and the first connection port and the second connection port are configured to connect the heat storage unit with a heat exchanger.

The secondary reference of Stuecheli shows in Fig. 1 that a liquid exit line 18 extends in a horizontal direction, and a connection port of a supply pipe 22 is positioned above a connection port of the liquid exit line 18. However, in Stuecheli, the connection port of the liquid exit line 18 and the connection port of the supply line 22 are connected to a variable delivery pump 20. (See Fig. 1) In Stuecheli, the pump 20 is operated so that the oil 16 is delivered toward the bottom part of the tank 12 via lines 18 and 22 in order to fluidize a pasty mixture created when the solar collector 36 is out of operation, and is converted from a static state to a mobile state. (See page 2, lines 73-93.) The supply line 22 and the liquid exit line 18 are not provided so as to connect a heat store 10 to a heat exchanger, and thus, clearly different from a supply pipe and a discharge pipe recited in claim 1. Indeed, the supply line 22 and the liquid exit line 18 of Stuecheli need not be connected with a heat exchanger, because the supply line 22 and the liquid exit line 18 of Stuecheli are for fluidizing a pasty mixture created when the solar collector 36 is out of operation, and is converted from a static state to a mobile state.

As such, the secondary reference of Stuecheli fails to provide any disclosure, teaching or suggestion that makes up for the deficiencies in Barlow. Therefore, at the time the invention was made, one of ordinary skill in the art could not and would not achieve all the features as recited in claim 1. Accordingly, claim 1 is not obvious in view of all the prior art cited.

### Claim 11

Claim 11 has substantially the same features as those of claim 1, at least with respect to at least a part of said discharge pipe extending in a horizontal direction, and a connection port of said supply pipe being positioned above a connection port of said discharge pipe, and the first connection port and the second connection port being configured to connect the heat storage unit with a heat exchanger.

As such, the arguments set forth above are equally applicable here. Claim 1 being allowable, claim 11 must also be allowable.

### Claims 2, 4, 5, 8, 13-15, 18

As to dependent claims 2, 4, 5, 8, 13-15, and 18, the arguments set forth above with respect to independent claims 1 and 11 are equally applicable here. The corresponding base claim being allowable, claims 2, 4, 5, 8, 13-15, and 18 must also be allowable.

### The Second 35 U.S.C. §103(a) Rejection

Each of claims 1-4, 11, and 14 was rejected under 35 U.S.C. §103(a) as being allegedly unpatentable over Lindner et al. (U.S. Pat. No. 4,086,958) in view of Stuecheli. Applicants respectfully traverse this rejection for the reasons set forth below.

### Claim 1

Lindner shows that a heat exchange apparatus comprises a supply conduit 23 for supplying a fluid heat exchange medium and a return conduit 29. Both the supply conduit 23 and the return conduit 29 extend in a vertical direction. However, Lindner does not show or suggest that a first connection port and a second connection port are configured to connect the heat storage unit with a heat exchanger.

As set forth above, Stuecheli does not show or suggest that the connection port of the liquid exit line 18 and the connection port of the supply line 22 being configured to connect a heat store 10 to a heat exchanger. In other words, the secondary reference of Stuecheli fails to provide any disclosure, teaching or suggestion that makes up for the deficiencies in Lindner. Therefore, at the time the invention was made, one of ordinary skill in the art could not and would not achieve all the features as recited in claim 1. Accordingly, claim 1 is not obvious in view of all the prior art cited.

#### Claim 11

Claim 11 has substantially the same features as those of claim 1, at least with respect to at least a part of said discharge pipe extending in a horizontal direction, and a connection port of said supply pipe being positioned above a connection port of said discharge pipe, and the first connection port and the second connection port being configured to connect the heat storage unit with a heat exchanger.

As such, the arguments set forth above are equally applicable here. Claim 1 being allowable, claim 11 must also be allowable.

#### Claims 2-4, 14

As to dependent claims 2-4 and 14, the arguments set forth above with respect to independent claims 1 and 11 are equally applicable here. The corresponding base claim being allowable, claims 2-4 and 14 must also be allowable.

#### The Third 35 U.S.C. §103(a) Rejection

Each of claims 10 and 20 was rejected under 35 U.S.C. §103(a) as being allegedly unpatentable over Barlow in view of Stuecheli, and further in view of Kakiuchi et al. (U.S. Patent No. 5,785,885). These rejections are respectfully traversed for the reasons set forth below.

As set forth above, the combination of Barlow and Stuecheli fails to teach all the elements recited in claims 1 and 11, from which claim 10 and 20 depend. The secondary reference of Kakiuchi is directed to a heat storage material composition. Kakiuchi fails to provide any disclosure, teaching or suggestion that makes up for the deficiencies in the combination of Barlow and Stuecheli. Therefore, at the time the invention was made, one of ordinary skill in the art could not and would not achieve all the features as recited in claims 1 and 11, from which claims 10 and 20 depend. Accordingly, claims 10 and 20 are not obvious in view of all the prior art cited.

#### The Fourth 35 U.S.C. §103(a) Rejection

Each of claims 7 and 17 was rejected under 35 U.S.C. §103(a) as being allegedly unpatentable over Barlow in view of Stuecheli, and further in view of Noji et al. (U.S. Patent No. 4,953,330). This rejection is respectfully traversed for the reasons set forth below.

As set forth above, the combination of Barlow and Stuecheli fails to teach all the elements recited in claims 1 and 11, from which claim 7 and 17 depend. The secondary reference of Noji is directed to a damping device for preventing the horizontal vibration of a structure from wind and earthquakes. Noji fails to provide any disclosure, teaching or suggestion that makes up for the deficiencies in the combination of Barlow and Stuecheli. Therefore, at the time the invention was made, one of ordinary skill in the art could not and would not achieve all the features as recited in claims 1 and 11, from which claims 7 and 17 depend. Accordingly, claims 7 and 17 are not obvious in view of all the prior art cited.

#### The Fifth 35 U.S.C. §103(a) Rejection

Each of claims 9 and 19 was rejected under 35 U.S.C. §103(a) as being allegedly unpatentable over Barlow in view of Stuecheli, and further in view of Strasser (WO 03/019099). This rejection is respectfully traversed for the reasons set forth below.

As set forth above, the combination of Barlow and Stuecheli fails to teach all the elements recited in claims 1 and 11, from which claim 9 and 19 depend. The secondary reference of Strasser shows that a discharging system 9 is positioned below a withdrawal conduit 5. In other words, Strasser fails to provide any disclosure, teaching or suggestion that makes up for the deficiencies in the combination of Barlow and Stuecheli. Therefore, at the time the invention was made, one of ordinary skill in the art could not and would not achieve all the features as recited in claims 1 and 11, from which claims 9 and 19 depend. Accordingly, claims 9 and 19 are not obvious in view of all the prior art cited.

#### The Sixth 35 U.S.C. §103(a) Rejection

Each of claims 12, 21-25, and 27 was rejected under 35 U.S.C. §103(a) as being allegedly unpatentable over Barlow in view of Stuecheli, and further in view of Strähle et al. (U.S. Pat. No. 6,056,043). As mentioned above, claim 25 is being canceled, and thus the rejection of claim 25 is moot. The rejection of claims 12, 21-24, and 27 is respectfully traversed for the reasons set forth below.

Claim 21 has substantially the same features as those of claim 1, at least with respect to at least a part of said discharge pipe extending in a horizontal direction, and a connection port of said supply pipe being positioned above a connection port of said discharge pipe, and the first connection port and the second connection port being configured to connect the heat

storage unit with a heat exchanger. As such, the arguments with respect to Barlow and Stuecheli set forth above are equally applicable to claim 21.

As set forth above, the combination of Barlow and Stuecheli fails to teach all the elements recited in claims 11, from which claim 12 depends, and claim 21, from which claims 22-24 and 27 depend. The secondary reference of Strähle fails to provide any disclosure, teaching or suggestion that makes up for the deficiencies in the combination of Barlow and Stuecheli. Therefore, at the time the invention was made, one of ordinary skill in the art could not and would not achieve all the features as recited in claims 11, from which claim 12 depends, and claim 21, from which claims 22-24 and 27 depend. Accordingly, claims 12, 21-24, and 27 are not obvious in view of all the prior art cited.

#### The Seventh 35 U.S.C. §103(a) Rejection

Claim 26 was rejected under 35 U.S.C. §103(a) as being allegedly unpatentable over Barlow in view of Stuecheli and Strähle, and further in view of Noji.

As set forth above, the combination of Barlow and Stuecheli fails to teach all the elements recited in claim 21, from which claim 26 depends. As set forth above, the secondary references of Strähle and Noji fail to provide any disclosure, teaching or suggestion that makes up for the deficiencies in the combination of Barlow and Stuecheli. Therefore, at the time the invention was made, one of ordinary skill in the art could not and would not achieve all the features as recited in claim 21, from which claim 26 depends. Accordingly, claim 26 is not obvious in view of all the prior art cited.

#### The Eighth 35 U.S.C. §103(a) Rejection

Claim 28 was rejected under 35 U.S.C. §103(a) as being allegedly unpatentable over Barlow in view of Stuecheli and Strähle, and further in view of Strasser.

As set forth above, the combination of Barlow and Stuecheli fails to teach all the elements recited in claim 21, from which claim 28 depends. As set forth above, the secondary references of Strähle and Strasser fail to provide any disclosure, teaching or suggestion that makes up for the deficiencies in the combination of Barlow and Stuecheli. Therefore, at the time the invention was made, one of ordinary skill in the art could not and would not achieve all the features as recited in claim 21, from which claim 28 depends. Accordingly, claim 28 is not obvious in view of all the prior art cited.

The Ninth 35 U.S.C. §103(a) Rejection

Claim 29 was rejected under 35 U.S.C. §103(a) as being allegedly unpatentable over Barlow in view of Stuecheli and Strähle, and further in view of Kakiuchi.

As set forth above, the combination of Barlow and Stuecheli fails to teach all the elements recited in claim 21, from which claim 29 depends. As set forth above, the secondary references of Strähle and Kakiuchi fail to provide any disclosure, teaching or suggestion that makes up for the deficiencies in the combination of Barlow and Stuecheli. Therefore, at the time the invention was made, one of ordinary skill in the art could not and would not achieve all the features as recited in claim 21, from which claim 29 depends. Accordingly, claim 29 is not obvious in view of all the prior art cited.

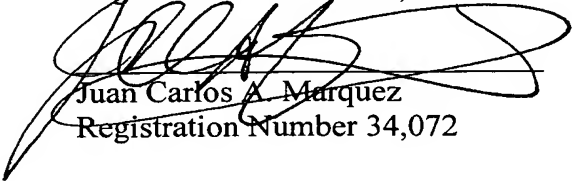
Conclusion

In light of the above Amendments and Remarks, Applicants respectfully request early and favorable action with regard to the present application, and a Notice of Allowance for all pending claims is earnestly solicited.

Favorable reconsideration of this application as amended is respectfully solicited. Should there be any outstanding issues requiring discussion that would further the prosecution and allowance of the above-captioned application, the Examiner is invited to contact the Applicants' undersigned representative at the address and telephone number indicated below.

Respectfully submitted,

\_\_\_\_\_  
Stanley P. Fisher  
Registration Number 24,344

  
Juan Carlos A. Marquez  
Registration Number 34,072

**REED SMITH LLP**  
3110 Fairview Park Drive  
Suite 1400  
Falls Church, Virginia 22042  
(703) 641-4200

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